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## ABSTRACT

Project DRIVE (Demonstration and Research for Indian Vocational Education) tested the suitability of the Oklahoma State Department of Vocational and Technical Education Unit-Based Curriculum and instructional materials for Indian vocational education. All students in welding and auto body programs at the United Tribes Educational Technical Center received their training using this material. At the end of an eighteen-month period they were compared to a control group which had completed the programs in the preceding eighteen months on three bases: student retention, student completion, and student interest and satisfaction. Welding students in the experimental group had a better retention and a lower termination rate than those in the control group. Auto body students in the experimental group showed a lower completion and higher termination rate. Findings indicated that teacher willingness to use the unit materials is a major factor in success or failure of the materials, as demonstrated in the auto body program where poor instructor attitude contributed to a lack of increase in completion rates. Furthermore, adoption of new curricula requires teacher training in the new material prior to its implementation, again as demonstrated by retention and completion results for students taught by the welding instructor trained in the new materials and the untrained auto body instructor. (YLB)

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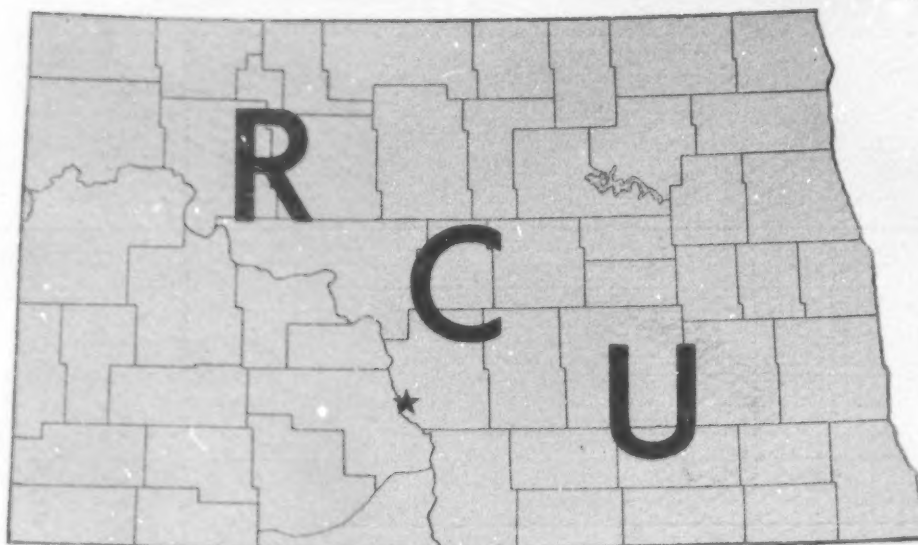
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# Demonstration and Research for Indian Vocational Education

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NORTH DAKOTA  
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STATE BOARD FOR VOCATIONAL EDUCATION  
STATE OFFICE BUILDING  
BISMARCK, NORTH DAKOTA 58505

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**THE STATE BOARD FOR VOCATIONAL EDUCATION**

900 East Boulevard  
Bismarck, North Dakota 58505

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**REUBEN GUENTHNER, Assistant Director**

**NORTH DAKOTA RESEARCH COORDINATING UNIT**

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## BACKGROUND

United Tribes Educational Technical Center was founded to enhance the economic and social development of American Indians through vocational education. From its founding in 1969 to 1978, no significant revision of curriculum materials occurred. Increasing concern on the part of administrators and instructors over the age of these materials and questions on the relevancy to the needs of present day Indians lead to a search for more contemporary materials.

Project DRIVE (Demonstration and Research for Indian Vocational Education) was funded by the North Dakota Research Coordinating Unit of the State Board for Vocational Education in July, 1978. As an experimental program, DRIVE furnished the financial means to test the suitability of the Oklahoma State Department of Vocational and Technical Curriculum and Instructional materials for Indian vocational education.

## IMPLEMENTATION

In this project, the Oklahoma materials were used in two (2) of the ten (10) vocational programs at the United Tribes Educational Technical Center (UTETC). Due to a high termination rate in the Auto Body and Welding Programs, these two vocations were used for the experiment. Unit Based Curricula materials were purchased for the two vocations from the Oklahoma State Department for Vocational and Technical Education.

Officials of the North Dakota State Board for Vocational Education provided an orientation workshop for instructors on the use of the materials.

Beginning July 1, 1978, all new Auto Body and Welding students recieved their vocational training using these materials. At the end of an eighteen month period, student retention and completion rates were compared with corresponding rates for the preceding eighteen months. Locally developed affective tests were administered to students to determine student interest and satisfaction with Unit Based instruction.

## POPULATION

All students in the vocations of Welding and Auto Body formed part of this experiment.

### EXPERIMENTAL GROUP:

The experimental group for Project DRIVE was all students who enrolled in the Auto Body and Welding program from

July 1, 1978 to December 31, 1979. There were 16 students who enrolled in Auto Body program. Fifty-four (54) students enrolled in the Welding Program during this same period.

#### CONTROL GROUP:

The control group for the project was all students enrolled in Auto Body and Welding from January 1, 1977 to June 30, 1978. In the Auto Body program, this totaled 17 students. In the Welding program, there were 44 students enrolled.

#### TIME LINE

The project compared student retention, completion, and termination rates of students in the experimental group (July 1, 1978 to December 31, 1979) with a control group (January 1, 1977 to June 30, 1978) who were already in the vocations and had received instruction using the traditional curricula. The experimental group would study using the Oklahoma curricula.

#### HYPOTHESIS

1. Experimental students will have less drop out rate than control students.
2. Experimental students will have better graduation rates than control students
3. Experimental students will like the vocation better than control students.

## RESULTS

Experimental students retention rate in the Welding vocation was 75.8% as compared was a 38.6% retention rate for the contral group of this vocation. This represents an overall increase of 37.%. At the same time, the termination rate of 61.3% for the contol group dropped to 24% for the experimental group. (See Table I.)

In the Auto Body program, the 52.9% completion rate of the control group dropped to 50% for the experimental group. The termination rate for the control group was 47% and increased to 50% for the experimental group. This is an overall loss of 3%.

The reasons for the lack of significant increase in the retention rate for the Auto Body program were:

- a. The instructor had no training in how to use Unit Based Curricula: whereas, in Welding the instructor did participate in a training workshop.
- b. The Auto Body teacher did not believe the adoption of Unit Based Curricula would be beneficial and he was, therefore, more inclined to use his own method of instruction; whereas, the Welding teacher was more favorably impressed with the new curricula.
- c. The Auto Body instructor only partially implemented the new curricula; whereas, the Welding instructor made extensive use of the Unit Based Curricula.

|           | CONTROL PERIOD     |              |             |             | EXPERIMENTAL PERIOD |              |             |             |
|-----------|--------------------|--------------|-------------|-------------|---------------------|--------------|-------------|-------------|
|           | Number of Students | Terminations | Graduations | Completions | Number of Students  | Terminations | Graduations | Completions |
| AUTO BODY | 17                 | 8            | 9           | 0           | 16                  | 8            | 1           | 7           |
| WELDING   | 44                 | 27           | 17          | 0           | 54                  | 13           | 19          | 22          |

5 Table I. Student statistics for Project DRIVE Vocations. (Control period is January 1, 1977 to June 30, 1978. Experimental period is July 1, 1978 to December 31, 1979.)

|           | CONTROL        |             | EXPERIMENTAL   |             | % Loss or Gain |
|-----------|----------------|-------------|----------------|-------------|----------------|
|           | % Terminations | % Retention | % Terminations | % Retention |                |
| AUTO BODY | 47             | 52.9        | 50             | 50          | 2.9 Loss       |
| WELDING   | 61.3           | 38.6        | 24             | 75.8        | 37.2 Gain      |

Table II. Percentage of student retention and termination rates for Project DRIVE

## SIGNIFICANCE OF PROJECT DRIVE

This project demonstrated three main findings to be considered by UTETC in the adoption of the Unit Based Curricula.

1. Teacher willingness to use the unit materials will be a major factor in the success or failure of the materials in vocational programs. This was demonstrated in the Auto Body program, where the attitude of the instructor contributed to a lack of increase in completion rates.
2. Adoption of new curricula will require teacher training in the new material prior to its implementation.
3. With proper training and implementation, the Unit Based Curricula is significantly better for student retention and completion rates.

## ADDITIONAL NOTE

Locally developed affective tests were administered to measure student interest in the new curricula.

The majority of Welding students indicated satisfaction with study through Unit Based Curricula.

Whereas the response from Auto Body students were mixed and cannot be interpreted.

## CONTRIBUTION TO VOCATIONAL & TECHNICAL EDUCATION

The Unit Based Curriculum of Oklahoma State is being implemented in each of UTETC's fifteen vocations. Based on the results of this project, teachers will be trained in the use of the new materials and then adopt prepared materials or develop materials that follow the design of Unit Based Curricula.

At the time of this report, the vocational staff of UTETC has been trained through a workshop in the use and development of this curricula. This workshop was conducted by the Mid-American Vocational Curriculum Consortia on October 10, 11, & 12, 1979. Since then the Unit Based Curricula is being implemented in all fifteen vocations.

Additionally the results of this study has been disseminated to each of the Indian Community Colleges in North Dakota.